

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

MICHAEL ABRACZINSKAS  
Director



**Enter Calendar Date**

Mr. Larry Spickard  
Plant Manager  
FMC Lithium USA Corp.  
1115 Bessemer City – Kings Mountain Highway  
Bessemer City, North Carolina 28016

Subject: Air Permit No. 03560T51  
Facility ID: 3600078  
FMC Lithium USA Corp.  
Bessemer City, Gaston County  
Fee Class: Title V  
PSD Classification: Minor

Dear Mr. Spickard:

In accordance with your completed Air Quality Permit Application for a renewal with associated modification of your Title V permit received May 31, 2019, we are forwarding herewith Air Quality Permit No. 03560T51 to FMC Lithium USA Corp., 1115 Bessemer City-Kings Mountain Highway, Bessemer City, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.



North Carolina Department of Environmental Quality | Division of Air Quality  
217 West Jones Street | 1641 Mail Service Center | Raleigh, North Carolina 27699-1641  
919.707.8400

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Gaston County has triggered increment tracking under PSD for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>. However, this permit modification/renewal does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from **Issuance Date** until **Expiration Date**, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Eric Crump at (919) 707-8470 or [eric.crump@ncdenr.gov](mailto:eric.crump@ncdenr.gov).

Sincerely yours,

Mark J. Cuilla, EIT, CPM, Acting Chief, Air Permitting Section  
Division of Air Quality, NCDEQ

Enclosure

c: Michael Sparks, EPA Region 4 (permit only)  
Connie Horne (cover letter only)  
Mooresville Regional Office  
Central Files

**ATTACHMENT to Permit No. 03560T51**

**Insignificant Activities per 15A NCAC 02Q .0503(8)**

<b>Emission Source ID</b>	<b>Description</b>
<b>IEX-LM01</b>	Natural gas-fired lithium cell heaters
<b>IEX-LHC01</b>	Lithium electrolytic cells
<b>IEX-LHC02a through IEX-LHC02d</b>	Four scrubber recirculation tanks
<b>IEX-LHC03a IEX-LHC03b</b>	Two chlorination tanks
<b>IES-SICP02</b>	Catalytic phosphate reactor
<b>IES-SIPC02</b>	Lithium carbonate reactor
<b>IEX-SO02</b>	Natural gas/propane-fired boiler (1.5 million Btu per hour maximum heat input capacity) in Specialty Organics
<b>IES-LABS</b>	Pilot Plant, research and development, analytical, and quality assurance laboratories
<b>IES-DEGREASE</b>	Non-halogenated degreaser in maintenance
<b>IES-DHBATT</b>	Dehumidification unit at Battery Metal (0.3 million Btu per hour)
<b>IES-DHKILO</b>	Dehumidification unit at Kilo Lab (0.3 million Btu per hour)
<b>IES-COOL</b>	Cooling towers
<b>IES-MAINT</b>	Maintenance activities
<b>IES-OSRS</b>	Oil smoke removal systems located in the Metal Cells Building and Battery Building
<b>IES-SO02-ST07</b>	Wash tank in the Specialty Organic Production Line
<b>IES-SO03</b>	Groundwater remediation storage tanks (30,500 gallon total capacity)
<b>IES-SO04</b>	Sulfuric acid storage tank used for wastewater treatment (5,000 gallon capacity)
<b>IES-FUELTANKS (GACT CCCCCC- gasoline tank only)</b>	Five fuel storage tanks (1-gasoline, 2-diesel, 1-kerosene, 1-used oil)
<b>IES-ENG1 (GACT ZZZZ)</b>	One diesel-fired emergency generator at the spare main (60 kW)
<b>IES-ENG2 (GACT ZZZZ)</b>	One diesel-fired emergency generator at the metal building (75 kW)
<b>IES-ENG3 (GACT ZZZZ)</b>	One diesel-fired emergency generator at the SO Plant (250 kW)
<b>IES-ENG4 (GACT ZZZZ)</b>	One diesel-fired emergency generator at OSW (80 kW)
<b>IES-ENG5 (GACT ZZZZ)</b>	One propane-fired emergency generator at the sewer lift station (20 kW)
<b>IES-ENG6 (GACT ZZZZ)</b>	One natural gas-fired emergency generator at computer server (25 kW)
<b>IES-ENG7 (GACT ZZZZ)</b>	One diesel-fired fire pump engine at Plant 1 (150 kW)
<b>IES-ENG8 (GACT ZZZZ)</b>	One diesel-fired fire pump engine at Plant 2 (150 kW)
<b>IES-HEATMAINT1</b>	Forced air heater 1 at Maintenance Facility (0.2 million Btu per hour)
<b>IES-HEATMAINT2</b>	Forced air heater 2 at Maintenance Facility (0.3 million Btu per hour)
<b>IES-IFHEATSHIP</b>	Five infrared heaters at Shipping (0.25 million Btu per hour each, 1.25 million Btu per hour total)
<b>IES-IFHEATCARBCONV</b>	Two infrared heaters at Carbonate Conveying (0.25 million Btu per hour each, 0.5 million Btu per hour total)
<b>IES-ROADS</b>	Fugitive emissions from roads

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in

determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit”.

3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled “Specific Permit Conditions Regulatory Guide.” The link to this site is as follows:  
<http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide>.

## Summary of Changes to Permit

The following changes were made to the FMC Lithium USA Corp. - Bessemer City, Air Permit No. 03560T50:

Page No.	Section	Description of Changes
Cover and throughout	---	Updated all dates and permit revision numbers
Insignificant Activities List	Attachment	<ul style="list-style-type: none"> <li>Deleted the following sources: <b>ID Nos. IEX-LBLC03, IES-OSW03</b></li> <li>Added the following sources: <b>ID Nos. IES-DHBATT, IES-DHKOLO, IES-HEATMAINT1, IES-HEATMAINT2, IES-IFHEATSHIP, IES-IFHEATCARB CONV, IES-ROADS, IES-ENG6</b></li> </ul>
3-4	1	<ul style="list-style-type: none"> <li>Added source <b>ID No. ES-LIME01</b></li> <li>Deleted the following sources (and associated control devices): <b>ID Nos. ES-PACK01, ES-LCL01b, EX-LCL02b, ES-LBLC01, ES-LBLC03, ES-LHC04, ES-LHC05, ES-LHC07, ES-SICP01, ES-SICP01, EX-SICP03, ES-OSW</b></li> <li>Deleted <b>Lithium Bromide Production</b> header</li> <li>Deleted double-asterisk footnote for <b>ID No. ES-Kilo</b></li> <li>Deleted quadruple-asterisk footnote for <b>ID No. ES-LOH02a</b></li> <li>Changed triple-asterisk footnote for sources listed under the lithium hydroxide process to double-asterisk</li> </ul>
8	2.1 B.2.c, d	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
8	2.1 C	<ul style="list-style-type: none"> <li>Deleted entire section C on lithium products repackaging (<b>ID No. ES-PACK01</b>) and controls).</li> <li>Re-lettered former section D for lithium hydroxide rotary dryer (<b>ID No. ES-LOH1</b> and controls) as section C</li> </ul>
9-10	2.1 C.1.f 2.1 C.2.c, e	Updated sections to reflect the most current stipulations for 15A NCAC 02D .0515 and .0521, respectively
10	2.1 D, E  2.1 E  2.1 E.1.c	Re-lettered former section E for stabilized lithium metal powder production ( <b>ID No. ES-Kilo</b> ) as section D Re-lettered former section F for lithium hydroxide packaging dust collection system ( <b>ID No. ES-LOH02</b> ) as section E Inserted the word “plate” between “impingement” and “scrubber”
11	2.1 E.1.f  2.1 E.2.c, e	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515  Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
11-12	2.1 F	Re-lettered former section G for lithium chloride conversion reactors ( <b>ID No. ES-LCL01a</b> ) as section F Deleted source <b>ID No. ES-LCL01b</b> from this section

Page No.	Section	Description of Changes
14	2.1 F.1.f	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515
	2.1 F.2.c, e	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
15	2.1 G	Re-lettered former section H for natural gas/propane-fired rotary dryer ( <b>ID No. ES-LCL03</b> ) as section G
16	2.1 G.1.f	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515
17	2.1 G.3.c, e	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
	2.1 H	<ul style="list-style-type: none"> <li>Deleted entire section J on natural gas/propane-fired lithium bromide spray dryer (ID No. <b>ES-LBLC01</b>) and associated controls).</li> <li>Re-lettered former section K for chlorine recovery system (<b>ID No. ES-LHC01</b>) and associated controls as section H</li> </ul>
18	2.1 H.2.c, e	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
19	2.1 I, J	<ul style="list-style-type: none"> <li>Deleted entire section L on natural gas/propane-fired lithium hypochlorite spray dryer (<b>ID No. ES-LHC04</b>) and associated controls).</li> <li>Deleted entire section M on lithium hypochlorite compaction and sizing operation (<b>ID No. ES-LHC05</b>) and lithium hypochlorite packaging operations (<b>ID No. ES-LHC07</b>) and associated controls).</li> <li>Re-lettered former section N for specialty organics production (<b>ID Nos. ES-SO01 and ES-SO02</b>) and associated tanks as section I</li> <li>Deleted entire section O on organometallics semiworks (<b>ID No. ES-OSW</b>) and associated controls).</li> <li>Re-lettered former section P for two steam-heated product rotary dryers (<b>ID Nos. ES-PROD01 and ES-PROD03</b>) and associated equipment and controls as section J</li> </ul>
21	2.1 K	Re-lettered former section Q for two finished product transfer and packaging ( <b>ID Nos. ES-PROD02 and ES-PROD04</b> ) and associated controls as section K
	2.1 K.1	Deleted paragraphs c and d; moved discussion of sources and controls to the following paragraph (now paragraph c); redesignated paragraphs e through i to d through g
23	2.1 K.2.c	Removed mention of establishing normal for sources

Page No.	Section	Description of Changes
24	2.1 L	Re-lettered former section R for Raw Material 2 Storage and Handling ( <b>ID Nos. ES-RM101 and ES-RM102</b> ) and associated controls as section L
25	2.1 L.1	Deleted paragraphs c and d; moved discussion of sources and controls to the following paragraph (now paragraph c); redesignated paragraphs e through i to d through g
26	2.1 M	Re-lettered former section S for Raw Material 1 Storage and Handling ( <b>ID Nos. ES-RM201 and ES-RM202</b> ) and associated controls as section M
26-27	2.1 M.1	Deleted paragraphs c and d; moved discussion of sources and controls to the following paragraph (now paragraph c); redesignated paragraphs e through i to d through g
28	2.1 N	Re-lettered former section T for pneumatic conveying section of lithium hydroxide packaging operations including two pulsejet fabric filters ( <b>ID No. ES-LOH02a</b> ) and associated controls as section N
29	2.1 O	Added new section O for lime railcar unloading operation ( <b>ID No ES-LIME01</b> )
32	2.2 A.1	<ul style="list-style-type: none"> <li>Deleted specialty inorganics (<b>ID Nos. ES-SIPC01 and ES-SICP01</b>) and organometallic semiworks (<b>ID No. ESW</b>) from table</li> <li>Deleted the words “phenyl lithium production” from description of specialty organics in the Emission Source(s) column of the table</li> <li>Changed “<b>ES-SO01-ST34</b>” to “<b>ES-SO01-ST36</b>” in the Emission Source(s) column of the table</li> </ul>
	2.2 A.2.a	Deleted “ <b>ES-SO03</b> ”
	2.2 a.2.b	Changed “LiCl” to “lithium chloride”, and deleted source <b>ID No. ES-LCL01b</b>
	2.2 A.2.c	Deleted paragraph c, and re-lettered paragraph d as paragraph c
33	2.2 A.2.e	<ul style="list-style-type: none"> <li>Deleted paragraph e, and re-lettered paragraph f as paragraph d.</li> <li>Changed “observations” to “monitoring and recordkeeping activities given in Sections 2.2 A.2.b.ii and c.ii above”</li> </ul>
	2.2.A.3	Redesignated Section 2 (15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS)” as Section 2.2 A.3
	2.2 A.3.a	Deleted spray dryers ( <b>ID Nos. ES-LBLC01, ES-LHC04</b> ) from table
	2.2 A.3.c	Changed “observations” to “monitoring and recordkeeping activities given in Sections 2.2 A.2.b.ii and c.ii above”

Page No.	Section	Description of Changes
35	2.2 D	Deleted section D, Facility-wide affected sources. Re-lettered section E as section D
	2.2 D.1	Inserted "AREAS" after "SOURCES IN NONATTAINMENT
36	2.2 D.1.d	Inserted "given in Section 2.2 D.1.c above" between the words "activities" and "postmarked"
	2.2 F	Re-lettered section F as section E
37	2.2 E.1.d	Inserted "given in Section 2.2 E.1.c above" between the words "activities" and "postmarked"
	2.2 G	Re-lettered section G as section F
38-48	3	Updated General Conditions to Version 5.5 dated 08/25/2020





State of North Carolina  
Department of Environmental Quality  
Division of Air Quality

## AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
03560T51	03560T50	XXXX	XXXX

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

**Permittee:** FMC Lithium USA Corp.

**Facility ID:** 3600078

**Facility Site Location:** 1115 Bessemer City – Kings Mountain Highway  
**City, County, State, Zip:** Bessemer City, Gaston County, North Carolina 28016

**Mailing Address:** 1115 Bessemer City - Kings Mtn. Highway  
**City, State, Zip:** Bessemer City, North Carolina 28016

**Application Number:** 3600078.19B  
**Complete Application Date:** May 31, 2019

**Primary SIC Codes:** 2819

**Division of Air Quality:** Mooresville Regional Office  
**Regional Office Address:** 610 East Center Avenue, Suite 301  
Mooresville, North Carolina 28115

Permit issued this the XX of Month, 2021

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Mark J. Cuilla, EIT, CPM, Acting Chief, Air Permitting Section  
By Authority of the Environmental Management Commission

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SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT

List of Acronyms

## SECTION 1 - PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Utility Boilers			
ES-UB3 ES-UB4	Two natural gas/propane-fired utility boilers (54.4 and 74.5 million Btu per hour maximum heat input capacity, respectively)	NA	NA
Railcar Unloading			
ES-LIME01	Lime railcar unloading operation	NA	NA
Lithium Carbonate Receiving			
ES-LCW02	One pneumatic transfer from super sacks to storage tanks	CD-LCW02	Cartridge filter (904 square feet of filter area)
Lithium Hydroxide Production			
ES-LOH01	Steam-heated rotary dryer	CD-LOH01-1	High efficiency cyclone (24 inches in diameter)
		CD-LOH01-2	Impingement plate scrubber
ES-LOH02	Dust collection system for finished lithium hydroxide packaging operations	CD-LOH02	Impingement plate scrubber
ES-LOH02a	Pneumatic conveying section of lithium hydroxide packaging operations including two pulsejet fabric filters	NA	NA
Lithium Chloride Production			
ES-LCL01a	One lithium chloride conversion reactor	CD-LCL01	Impingement plate scrubber
EX-LCL02a*	One hydrochloric acid storage tank	CD-LCL02	Packed bed scrubber
ES-LCL03	One “old” natural gas/propane-fired rotary dryer (1.0 million Btu per hour maximum heat input capacity)	CD-LCL03	Packed bed scrubber
Chlorine Recovery			
ES-LHC01	Chlorine recovery system consisting of 10 lithium metal manufacturing cells	CD-LHC01	“West” venturi eductor
		CD-LHC03	Packed bed absorber
		CD-LHC02	“East” venturi eductor
		CD-LHC04	Packed bed absorber
Kilo Production			
ES-Kilo	SLMP production	NA	NA
Specialty Organics Production			
ES-SO01	Various production activities including: -30 process vessels (e.g., process reactors, filters, and/or process tanks) -36 storage tanks (Nos. TK-100 through	CD-SO01-3	Natural gas-fired flare (1.5 million Btu per hour maximum heat input capacity)

	TK-955, excluding vessels in ES-SO02) -railcar, truck, isotainer, cylinder loadout station (No. RCL01)		
ES-SO02	-Four storage tanks (Nos. TK-104, TK-105, TK-700, and TK-711)* -Hydrochloric acid tank (No. TK-110)* -Washout tank (No. TK-682)* -Drum loadout station (No. DLS01)	NA	NA
<b>Lithium Hydroxide Process</b>			
<b>Plant 1</b>			
ES-PROD01**	One Steam-heated Product Rotary Dryer with fines dissolver, product screener, and material transfer filters	CD-SCR1** CD-SCR2**	Venturi-type Wet Scrubber Venturi-type Wet Scrubber
ES-PROD02**	Finished Product Transfer and Packaging and material transfer filter	CD-SCR2**	Venturi-type Wet Scrubber
ES-RM101**	Raw Material 1 Storage and Handling with material transfer filter	CD-SCR1**	Venturi-type Wet Scrubber
ES-RM201**	Raw Material 2 Storage and Handling with material transfer filters	CD-SCR1**	Venturi-type Wet Scrubber
<b>Plant 2</b>			
ES-PROD03**	One Steam-heated Product Rotary Dryer with fines dissolver, product screener, and material transfer filters	CD-SCR3** CD-SCR4**	Venturi-type Wet Scrubber Venturi-type Wet Scrubber
ES-PROD04**	Finished Product Transfer and Packaging and material transfer filter	CD-SCR4**	Venturi-type Wet Scrubber
ES-RM102**	Raw Material 1 Storage and Handling with material transfer filter	CD-SCR3**	Venturi-type Wet Scrubber
ES-RM202**	Raw Material 2 Storage and Handling with material transfer filters	CD-SCR3**	Venturi-type Wet Scrubber

\* These emission sources are insignificant for Title V purposes; however, they are permitted pursuant to State-enforceable only requirements.

\*\* These emission sources (**ID Nos. ES-PROD01, ES-PROD02, ES-PROD03, ES-PROD04, ES-RM101, ES-RM102, ES-RM201 and ES-RM202**) and control devices (**ID Nos. CD-SCR1, CD-SCR2, CD-SCR3 and CD-SCR4**) are listed as a 15A NCAC 02Q .0501(b)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

Note: Area was designated as Moderate Ozone Non-Attainment Area; therefore, facility underwent a RACT review for existing sources as per Permit 03560T45.

## SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

### 2.1 - Emission Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, record keeping, and reporting requirements as specified herein:

#### A. Two natural gas/propane-fired utility boilers (ID Nos. ES-UB3 and ES-UB4)

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.26 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	(ID No. ES-UB3 only) 40 percent opacity  (ID No. ES-UB4 only) 20 percent opacity	15A NCAC 02D .0521
Toxic Air Pollutants	<b>State Enforceable only</b> <b>See Section 2.2 A</b>	15A NCAC 02D .1100
Volatile Organic Compounds	<i>For entire facility:</i> RACT and NNSR Avoidance – Emissions limited to 100 tons per year of VOC <b>See Section 2.2 E</b>	15A NCAC 02Q .0317 for 15A NCAC 02D .0531
Nitrogen Oxides	<i>For entire facility:</i> RACT and NNSR Avoidance – Emissions limited to 100 tons per year of NOx <b>See Section 2.2 F</b>	15A NCAC 02Q .0317 for 15A NCAC 02D .0531

#### 1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas or propane that are discharged from these sources (ID Nos. ES-UB3 and ES-UB4) into the atmosphere shall not exceed 0.26 pounds per million Btu heat input.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas or propane in these sources (ID Nos. ES-UB3 and ES-UB4).

#### 2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources (ID Nos. ES-UB3 and ES-UB4) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas or propane in these sources (**ID Nos. ES-UB3 and ES-UB4**).

**3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-UB4**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.
- b. Visible emissions from this source (**ID No. ES-UB3**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.3.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- d. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas or propane in these sources (**ID Nos. ES-UB3 and ES-UB4**).

**B. Lithium carbonate receiving (ID No. ES-LCW02) with associated cartridge filter (ID No. CD-LCW02)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons/hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID No. ES-LCW02**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from this source (**ID No. ES-LCW02**) shall be controlled by one cartridge filter (**ID No. CD-LCW02**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection of the system ductwork and material collection unit for leaks, and
  - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the cartridge filter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and cartridge filter are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on any control device; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 B.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-LCW02**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LCW02**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**C. One steam-heated lithium hydroxide rotary dryer (ID No. ES-LOH01) with associated high efficiency cyclone (ID No. CD-LOH01-1) and impingement plate scrubber (ID No. CD-LOH01-2)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<p><b>(For process rates less than/equal to 30 tons/hour)</b>  <math>E = 4.10 \times P^{0.67}</math></p> <p><b>(For process rates greater than 30 tons/hour)</b>  <math>E = 55.0 \times P^{0.11} - 40</math></p> <p>Where: E = allowable emission rate in pounds per hour  P = process weight in tons per hour</p>	15A NCAC 02D .0515
Visible emissions	40 percent opacity	15A NCAC 02D .0521

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID No. ES-LOH01**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour



P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from this source (**ID No. ES-LOH01**) shall be controlled by one high efficiency cyclone (**ID No. CD-LOH01-1**) and one impingement plate scrubber (**ID No. CD-LOH01-2**) as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection of the system ductwork, cyclone, and impingement plate scrubber for leaks;
  - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the structural integrity of the cyclone and impingement plate scrubber; and
  - iii. a daily check of the water supply to the scrubber for operation within the manufacturer's suggested operating range.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork, cyclone, and impingement plate scrubber are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on any control device; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 C.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-LOH01**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LOH01**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 C.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**D. SLMP (Stabilized Lithium Metal Powder) Production (ID No. ES-Kilo)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	<b>State Enforceable only:</b> <b>See Section 2.2 A</b>	15A NCAC 02D .1100
VOC	<b>See Section 2.2 B</b>	15A NCAC 02D .0958
Odors	<b>State enforceable only</b> <b>See Section 2.2 C</b>	15A NCAC 02D .1806

**E. Lithium hydroxide packaging dust collection system (ID No. ES-LOH02) with associated impingement plate scrubber (ID No. CD-LOH02)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons/hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour	15A NCAC 02D .0515

Regulated Pollutant	Limits/Standards	Applicable Regulation
	P = process weight in tons per hour	
Visible emissions	40 percent opacity	15A NCAC 02D .0521

# 1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source (**ID No. ES-LOH02**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

## Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

## Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from this source (**ID No. ES-LOH02**) shall be controlled by one impingement plate scrubber (**ID No. CD-LOH02**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the system ductwork and scrubber system for leaks;
  - an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber system structural integrity and spray nozzles; and
  - a daily check of the water supply to the scrubber for operation within the manufacturer's suggested operating range.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following for the ductwork and scrubber system:
- the date and time of each recorded action;
  - the results of each inspection;
  - the results of any maintenance performed on any control device; and
  - any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

## Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 E.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit

must be clearly identified.

## 2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (**ID No. ES-LOH02**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

### **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

### **Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LOH02**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 E.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

### **Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 E.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## **F. Lithium chloride conversion reactors (ID Nos. ES-LCL01a) with associated impingement plate scrubber (ID No. CD-LCL01)**

The following table provides a summary of limits and/or standards for the emission source described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons/hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	40 percent opacity	15A NCAC 02D .0521
Odors	<b>State enforceable only</b> <b>See Section 2.2 C</b>	15A NCAC 02D .1806

## 1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source (**ID Nos. ES-LCL01**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

### **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

### **Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from this source (**ID Nos. ES-LCL01a**) shall be controlled by one impingement plate scrubber (**ID No. CD-LCL01**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the system ductwork and scrubber system for leaks;
  - an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber system structural integrity; and
  - a daily check of the water supply to the scrubber for operation within the manufacturer's suggested operating range.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- the date and time of each recorded action;
- the results of each inspection;
- the results of any maintenance performed on any control device; and
- any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 F.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID Nos. ES-LCL01a**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID Nos. ES-LCL01a**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 F.2.a above.
- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 F.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**G. One “old” natural gas/propane-fired rotary dryer (ID No. ES-LCL03) with associated packed bed scrubber (ID No. CD-LCL03)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons/hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	40 percent opacity	15A NCAC 02D .0521
Toxic Air Pollutants	<b>State enforceable only</b> <b>See Section 2.2 A</b>	15A NCAC 02D .1100
Odors	<b>State enforceable only</b> <b>See Section 2.2 C</b>	15A NCAC 02D .1806
Volatile Organic Compounds	<i>For entire facility:</i> RACT and NNSR Avoidance – Emissions limited to 100 tons per year of VOCs <b>See Section 2.2 E</b>	15A NCAC 02Q .0317 for 15A NCAC 02D .0531
Nitrogen Oxides	<i>For entire facility:</i> RACT and NNSR Avoidance – Emissions limited to 100 tons per year of NOx <b>See Section 2.2 F</b>	15A NCAC 02Q .0317 for 15A NCAC 02D .0531

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID No. ES-LCL03**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from this source (**ID No. ES-LCL03**) shall be controlled by one packed bed scrubber (**ID No. CD-LCL03**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there are no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the system ductwork and scrubber system for leaks;
  - an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber

- system's structural integrity including packing material and spray nozzles; and
- iii. a daily check of the water supply to the scrubber for operation within the manufacturer's suggested operating range.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber system are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on any control device; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 G.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source (**ID No. ES-LCL03**) shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in this source (**ID No. ES-LCL03**).

**3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-LCL03**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.



**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LCL03**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
- take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 G.3.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 G.3.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**H. Chlorine recovery system consisting of 10 lithium metal manufacturing cells (ID No. ES-LHC01) with two associated venturi eductor and packed bed absorber combination systems (only one control system operates at a time; ID Nos. CD-LHC01/03 and CD-LHC02/04)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons/hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Odors	<b>State enforceable only</b> <b>See Section 2.2 C</b>	15A NCAC 02D .1806

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID No. ES-LHC01**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from this source (**ID No. ES-LHC01**).

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-LHC01**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LHC01**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 H.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations monitoring and recordkeeping activities

given in Sections 2.1 H.2.c and d above on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**I. Specialty Organics Production (ID Nos. ES-SO01 and ES-SO02) including:  
-three storage tanks (ID Nos. ES-SO02-ST04 through ES-SO02-ST06)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	State Enforceable only See Section 2.2 A	15A NCAC 02D .1100
Odors	State enforceable only See Section 2.2 C	15A NCAC 02D .1806
Volatile Organic Compounds	For entire facility: RACT and NNSR Avoidance – Emissions limited to 100 tons per year of VOC See Section 2.2 E	15A NCAC 02Q .0317 for 15A NCAC 02D .0531

**J. One Steam-heated Product Rotary Dryer (ID No. ES-PROD01) with fines dissolver, product screener, and material transfer filters controlled by a wet scrubber (ID No. CD-SCR1 or CD-SCR2).**

**One Steam-heated Product Rotary Dryer (ID No. ES-PROD03) with fines dissolver, product screener, and material transfer filters controlled by a wet scrubber (ID No. CD-SCR3 or CD-SCR4).**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	(For process rates less than/equal to 30 tons/hour) $E = 4.10 \times P^{0.67}$ (For process rates greater than 30 tons/hour) $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources (**ID Nos. ES-PROD01 and ES-PROD03**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates up to 30 tons per hour})$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 J.1.a above, the Permittee shall be deemed in

noncompliance with 15A NCAC 02D .0515.

**Monitoring** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources (**ID Nos. ES-PROD01 and ESPROB03**) shall be controlled by wet scrubbers (**ID Nos. CD-SCR1 or CD-SCR2 and CD-SCR3 or CD-SCR4**) as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection of the system ductwork and scrubber system for leaks;
  - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber's structural integrity including packing material and spray nozzles; and
  - iii. annual calibration of all associated instrumentation.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubbers are not inspected and maintained.
- d. The Permittee shall monitor and record in a logbook, at least once per calendar week, the liquid supply for each of the wet scrubbers (**ID Nos. CD-SCR1 through CD-SCR4**) that shall be within the manufacturer's suggested operating range. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on any control device; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 J.1.c through e above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from these sources (**ID Nos. ES-PROD1 and ES-PROD3**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 J.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. ES-PROD1 and ES-PROD3**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish “normal” for these sources in the first 30 days following beginning operation. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
- take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 J.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if “normal” is not established for these sources in the first 30 days following beginning operation.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 J.2.c and d above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**K. Finished Product Transfer and Packaging (ID No. ES-PROD02) and material transfer filter controlled by a wet scrubber (ID No. CD-SCR2)  
Finished Product Transfer and Packaging (ID No. ES-PROD04) and material transfer filter controlled by a wet scrubber (ID No. CD-SCR4)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons per hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources (**ID Nos. ES-PROD02 and ES-PROD04**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$
$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates up to 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources (**ID Nos. ES-PROD02 and ES-PROD04**) shall be controlled by wet scrubbers (**ID Nos. CD-SCR2 and CD-SCR4**) as described above. To ensure compliance, for each of the wet scrubbers (**ID Nos. CD-SCR2 and CD-SCR4**), the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the ductwork and scrubber for leaks;
  - an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber's structural integrity; and
  - annual calibration of all associated instrumentation.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber are not inspected and maintained.
- d. The Permittee shall monitor and record in a logbook, at least once per calendar week, the liquid supply for each of the wet scrubbers (**ID Nos. CD-SCR2 and CD-SCR4**) that shall be within the manufacturer's suggested operating range.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following for the ductwork and scrubber system:
- the date and time of each recorded action;
  - the results of each inspection;
  - the results of any maintenance performed on any control device; and
  - any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 K.1.c through e, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## 2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ES-PROD02 and ES-PROD04**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

### **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

### **Monitoring** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. ES-PROD02 and ES-PROD04**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 K.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the periodic observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if “normal” is not established for these sources in the first 30 days following beginning operation.

### **Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

### **Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 K.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

- L. **Raw Material 1 Storage and Handling (ID No. ES-RM101) with material transfer filter controlled by a wet scrubber (ID No. CD-SCR1)**  
**Raw Material 1 Storage and Handling (ID No. ES-RM102) with material transfer filter controlled by a wet scrubber (ID No. CD-SCR3)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons per hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

# 1. **15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources (**ID Nos. ES-RM101 and ES-RM102**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour})$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

## **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

## **Monitoring** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources (**ID Nos. ES-RM101 and ES-RM102**) shall be controlled by wet scrubbers (**ID Nos. CD-SCR1 and CD-SCR3**) as described above. To ensure compliance, for each of the wet scrubbers (**ID Nos. CD-SCR1 and CD-SCR3**), the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the ductwork and scrubber for leaks;
  - an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber's structural integrity; and
  - annual calibration of all associated instrumentation.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber are not inspected and maintained.
- d. The Permittee shall monitor and record in a logbook, at least once per calendar week, the liquid supply for each of the wet scrubbers (**ID Nos. CD-SCR1 and CD-SCR3**) that shall be within the manufacturer's suggested operating range. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

## **Recordkeeping** [15A NCAC 02Q .0508(f)]

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each inspection;
  - the results of any maintenance performed on any control device; and



iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 L.1.c through e above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from these sources (**ID Nos. ES-RM101 and ES-RM102**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. ES-RM101 and ES-RM102**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for these sources in the first 30 days following beginning operation. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 L.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for these sources in the first 30 days following beginning operation.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in

Sections 2.1 L.2.c and d above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**M. Raw Material 2 Storage and Handling (ID No. ES-RM201) with material transfer filters controlled by a wet scrubber (ID No. CD-SCR1)**

**Raw Material 2 Storage and Handling (ID No. ES-RM202) with material transfer filters controlled by a wet scrubber (ID No. CD-SCR3)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<p><b>(For process rates less than/equal to 30 tons/hour)</b>  <math>E = 4.10 \times P^{0.67}</math></p> <p><b>(For process rates greater than 30 tons per hour)</b>  <math>E = 55.0 \times P^{0.11} - 40</math></p> <p>Where: E = allowable emission rate in pounds per hour  P = process weight in tons per hour</p>	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources (**ID Nos. ES-RM201 and ES-RM202**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour})$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 M.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring** [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources (**ID Nos. ES-RM201 and ES-RM202**) shall be controlled by wet scrubbers (**ID Nos. CD-SCR1 and CD-SCR3**) as described above. To ensure compliance, for each of the wet scrubbers (**ID Nos. CD-SCR1 and CD-SCR3**), the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the ductwork and scrubber for leaks;
  - an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber's structural integrity; and
  - annual calibration of all associated instrumentation.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber are not inspected and maintained.
- d. The Permittee shall monitor and record in a logbook, at least once per calendar week, the liquid supply for

each of the wet scrubbers (**ID Nos. CD-SCR1 and CD-SCR3**) that shall be within the manufacturer's suggested operating range. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on any control device; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 M.1.c through e above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## 2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ES-RM201 and ES-RM202**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 M.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. ES-RM201 and ES-RM202**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for these sources in the first 30 days following beginning operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 M.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for these sources in the first 30 days following beginning operation.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 M.2.c and d above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**N. Pneumatic conveying section of lithium hydroxide packaging operations including two pulsejet fabric filters (ID No. ES-LOH02a)**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons per hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID Nos. ES-LOH02a**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour})$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 N.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515

if the production records are not maintained or the types of materials and finishes are not monitored.

- d. No reporting is required for particulate emissions from this source (**ID No. ES-LOH02a**) for compliance with this regulation.

## 2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (**ID No. ES-LOH02a**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

### **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 N.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

### **Monitoring** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LOH02a**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish “normal” for this source in the first 30 days following beginning operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 N.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if “normal” is not established for this source in the first 30 days following beginning operation.

### **Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

### **Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 N.2.c and d above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## O. Lime railcar unloading operation (ID No ES-LIME01)

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<b>(For process rates less than/equal to 30 tons/hour)</b> $E = 4.10 \times P^{0.67}$ <b>(For process rates greater than 30 tons per hour)</b> $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

## 1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source (**ID Nos. ES-LIME01**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour})$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

Where: E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

### **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 O.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

### **Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.
- d. No reporting is required for particulate emissions from this source (**ID No. ES-LIME01**) for compliance with this regulation.

## 2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (**ID No ES-LIME01**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

### **Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 O.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

### **Monitoring** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-LIME01**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for this source in the first 30 days following the effective date of this permit. If visible emissions

from this source are observed to be above normal, the Permittee shall either:

- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
- ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 O.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if “normal” is not established for this source in the first 30 days following the effective date of this permit.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 O.2.c and d above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## 2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

### State-enforceable only

#### A. Facility-wide affected sources

**15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

**15A NCAC 02Q .0711: EMISSION RATES REQUIRING A PERMIT**

1. In order to avoid applicability pursuant to 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

<b>Emission Source(s)</b>	<b>Toxic Air Pollutant</b>	<b>Emission Limit(s)</b>
Specialty Organics Various production activities including 30 process vessels ( <b>ID Nos. ES-SO01-PV01 through ES-SO01-PV30</b> )	Acetic acid	2.36 lbs/hr
Specialty organics ( <b>ID Nos. ES-SO01-PV01 through ES-SO01-PV30 and ES-SO01-ST25 through ES-SO01-ST36</b> ) including-hexane usage, and cyclohexane usage Gasoline Storage and Dispensing	Benzene	127.2 lbs/yr

2. To ensure compliance with the toxic air pollution emissions facility limits above (accepted to avoid ambient air quality impact analyses pursuant to 15A NCAC 02D .1100) and the toxic pollutant exemption rates under 15A NCAC 02Q .0711, the following restrictions shall apply:
  - a. The lithium chloride conversion reactor (**ID Nos. ES-LCL01a**) shall receive hydrochloric acid through submerged fill lines.
  - b. VOC emissions from the specialty organics processes (**ID Nos. ES-SO01-PV01 through ES-SO01-PV30, ES-SO01-ST01 through ES-SO01-ST36, and ES-SO01-RCL01**) shall be controlled with a natural gas-fired flare (**ID No. CD-SO01-3**).

#### **Monitoring/Recordkeeping**

- i. An operating logbook (electronic or written format) shall be maintained on site and made available to the Division of Air Quality on request.
- ii. The ductwork and flare system shall be inspected and maintained in accordance with the manufacturer's recommendations. As a minimum, the ductwork and the flare system will be inspected monthly for structural integrity. In addition, the flare shall be visually checked daily to ensure that it is functioning properly during facility operation. The performance of these inspections, the inspection results, and any maintenance performed on the system shall be recorded in the logbook.
- c. Hydrogen chloride emissions from the hydrochloric acid storage tank (**ID No. EX-LCL02a**) shall be controlled with a packed bed scrubber (**ID No. CD-LCL02**).

#### **Monitoring/Recordkeeping**

- i. An operating logbook (electronic or written format) shall be maintained on site and made available to the Division of Air Quality on request.
- ii. The ductwork and the scrubber system shall be inspected and maintained in accordance with the manufacturers recommendations. As a minimum, the ductwork and the scrubber system (including bed packing and spray nozzles) will be inspected annually for structural integrity. In addition, the scrubber system shall be visually checked to ensure that it is functioning properly during hydrochloric acid loading. The performance of these inspections, the inspection results, and any maintenance performed on a system shall be recorded in the logbook.



**Reporting**

- d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.2 A.2.b and c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall report times when a flare or scrubber system was not functioning during a period when emissions were vented to the device, the duration of the uncontrolled emissions, and the action/repair performed to abate emissions.

**State-enforceable only****3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

- a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application (Application No. 3600078.12C and 3600078.14A) for an air toxic compliance demonstration, the following emission rates shall not be exceeded:

<b>Pollutant (CAS No.)</b>	<b>Emission Source(s)</b>	<b>Emission Limits</b>
Chlorine (7782-50-5)	Facility wide affected sources	84.7 pounds per hour 205.3 pounds per day
Hydrogen chloride (7647-01-0)	Facility wide affected sources	12.9 pounds per hour
n-Hexane	Facility wide affected sources including: <ul style="list-style-type: none"> <li>• Boiler (ID No. ES-UB3)</li> <li>• Boiler (ID No. ES-UB4)</li> <li>• Rotary Dryer (ID No. ES-LCL03)</li> <li>• Various Process Vessels (ID No. ES-S001)</li> <li>• SLMP (ID No. ES-Kilo)</li> </ul>	377.1 pounds per day

- b. Chlorine and hydrogen chloride gas emissions from the Chlorine recovery system consisting of 10 lithium metal manufacturing cells (ID No. ES-LHC01) shall be controlled with eductor with packed bed adsorber (ID Nos. CD-LHC01 and CD-LHC03) or (ID Nos. CD-LHC02 and CD-LHC04) installed in parallel.

**Monitoring/Recordkeeping**

- i. An operating logbook (electronic or written format) shall be maintained on site and made available to the Division of Air Quality on request.
- ii. The ductwork and each scrubber system shall be inspected and maintained in accordance with the manufacturers recommendations. As a minimum, the ductwork and the scrubber system (including bed packing and spray nozzles) will be inspected annually for structural integrity. In addition, the scrubber system shall be visually checked to ensure that it is functioning properly during pilot plant operations generating gas emissions. The performance of these inspections, the inspection results, and any maintenance performed on a system shall be recorded in the logbook.

**Reporting**

- c. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.2 A.2.b above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall report times when a flare or scrubber system was not functioning during a period when emissions were vented to the device, the duration of the uncontrolled emissions, and the action/repair performed to abate emissions.

**B. Facility-wide affected sources**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
Volatile organic compounds	Work practice standards	15A NCAC 02D .0958

**1. 15A NCAC 02D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS**

- a. Pursuant to 15A NCAC 02D .0958, for all sources that use volatile organic compounds (VOCs) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture VOCs, or emit VOCs as a product of chemical reactions, the Permittee shall:
  - i. store all material, including waste material, containing VOCs in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
  - ii. clean up spills of VOCs as soon as possible following proper safety procedures,
  - iii. store wipe rags containing VOCs in closed containers,
  - iv. not clean sponges, fabric, wood, paper products, and other absorbent materials with VOCs,
  - v. transfer solvents containing VOCs used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under Section 402 of the Clean Water Act,
  - vi. clean mixing, blending, and manufacturing vats and containers containing VOCs by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under Section 402 of the Clean Water Act.
- b. When cleaning parts with a solvent containing VOCs, the Permittee shall:
  - i. flush parts in the freeboard area,
  - ii. take precautions to reduce the pooling of solvent on and in the parts,
  - iii. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
  - iv. not fill cleaning machines above the fill line,
  - v. not agitate solvent to the point of causing splashing.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. To ensure compliance with Sections 2.2 B.1.a and b above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing VOCs. The inspections shall be conducted during normal operations. If the required inspections are not conducted the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0958.
- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each inspection; and
  - ii. the results of each inspection noting whether or not noncompliant conditions were observed.
 If the required records are not maintained the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0958.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.2 B.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**C. Facility-wide affected sources**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Odors	<b>State-enforceable only</b> Odorous emissions must be controlled	15A NCAC 02D .1806

**State-enforceable only****1. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

- a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

**D. Facility-wide affected sources**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	VOC emissions shall be less than 100 tons per consecutive 12-month period from the entire facility	15A NCAC 02Q .0317 for 15A NCAC 02D .0531 (NNSR/RACT Avoidance)

**1. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS****for 15A NCAC 02D .0531: SOURCES IN NONATTAINMENT AREAS**

- a. In order to avoid applicability of 15A NCAC 02D .0531, VOC emissions from the entire facility shall be less than 100 tons per consecutive 12-month period.

**Testing** [15A NCAC 02D .0501(c)(17)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0531.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. Calculations of VOC emissions shall be made monthly and recorded in a logbook (written or electronic format) based on the monthly organic chemical production according to the following:

$$T_{\text{VOC}} = \sum [Q_{\text{VOC}} (\text{batch}) + Q_{\text{VOC}} (\text{tanks}) + Q_{\text{VOC}} (\text{combustion})]$$

Where:  $T_{\text{VOC}}$  = total VOC emissions per month, tons/month

$Q_{\text{VOC}} (\text{batch})$  = pounds of emissions based on the monthly organic chemical production, VOCs lb/batch of each batch and the number of batches for each product manufactured each month is then multiplied by its respective VOCs lb/batch and control efficiency of emissions controls based on accepted methodology as established in the annual emissions inventory.

$Q_{\text{VOC}} (\text{tanks})$  = pounds of emissions from each tank based on accepted methodology as established in the annual emissions inventory.

$Q_{\text{VOC}} (\text{combustion})$  = pounds of emissions from each dryer and boiler based on accepted methodology as established in the annual emissions inventory.

If emissions are not monitored or records are not maintained the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0531.

**Reporting** [15A NCAC 02Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.2 D.1.c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly VOC emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

**E. Facility-wide affected sources**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen Oxides	NOx emissions shall be less than 100 tons per consecutive 12-month period from the entire facility	15A NCAC 02Q .0317 for 15A NCAC 02D .0531 (NNSR/RACT Avoidance)

**1. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS  
for 15A NCAC 02D .0531: SOURCES IN NONATTAINMENT**

- a. In order to avoid applicability of 15A NCAC 02D.0531, NOx emissions from the entire facility shall be less than 100 tons per consecutive 12-month period.

**Testing** [15A NCAC 02D .0501(c)(17)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 E.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0531.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. Calculations of NOx emissions shall be made monthly and recorded in a logbook (written or electronic format) according to the following:

$$T_{NOx} = \sum [Q_{Nat\ Gas} (\text{facility wide natural gas combustion}) \times EF_{AP-42} + Q_{NOx} (\text{batch}) \times EF_{organo-metallic}]$$

Where:  $T_{NOx}$  = total NOx emissions per month (tons/month)

$Q_{Nat\ Gas}$  = total amount of natural gas consumed per month (cubic feet)

$EF_{AP-42}$  = emissions factor for all natural gas combustion NOx emissions (lb/cubic feet) per AP-42 and based on accepted methodology as established in the annual emissions inventory

$Q_{NOx} (\text{batch})$  = pounds of emissions based on the monthly organo-metallic chemical production, NOx (lb/batch) of each batch and the number of batches each month for each product manufactured each month is then multiplied by the respective NOx (lb/batch) and control efficiency of emissions controls based on accepted methodology as established in the annual emissions inventory

$EF_{organo-metallic}$  = emissions factor for NOx emissions for each batch (lb/batch) based on accepted methodology as established in the annual emissions inventory.

If emissions are not monitored or records are not maintained the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0531.

**Reporting** [15A NCAC 02Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.2 E.1.c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly NO<sub>x</sub> emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

## **F. Permit Application Submittal Requirement**

### **1. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT**

#### **Permitting** [15A NCAC 02Q .0504(d)]

- a. Pursuant to 15A NCAC 02Q .0501(b)(2), for completion of the two-step significant modification process initiated by Application No. 3600078.19A, the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of any of these sources (**ID Nos. ES-PROD01, ES-PROD02, ES-PROD03, ES-PROD04, ES-RM101, ES-RM102, ES-RM201 and ES-RM202**).

#### **Reporting** [15A NCAC 02Q .0508(f)]

- b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of any of these sources (**ID Nos. ES-PROD01, ES-PROD02, ES-PROD03, ES-PROD04, ES-RM101, ES-RM102, ES-RM201 and ES-RM202**), postmarked no later than 30 days after such date.

## SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NO<sub>x</sub> budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance  
North Carolina Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.

3. Minor Permit Modifications [15A NCAC 02Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.

4. Significant Permit Modifications [15A NCAC 02Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.

5. Reopening for Cause [15A NCAC 02Q .0517]

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]

- a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
  - i. the changes are not a modification under Title I of the Federal Clean Air Act;
  - ii. the changes do not cause the allowable emissions under the permit to be exceeded;

- iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
    - iv. the Permittee shall attach the notice to the relevant permit.
  - c. The written notification shall include:
    - i. a description of the change;
    - ii. the date on which the change will occur;
    - iii. any change in emissions; and
    - iv. any permit term or condition that is no longer applicable as a result of the change.
  - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
- 3. Off Permit Changes [15A NCAC 02Q .0523(b)]  
 The Permittee may make changes in the operation or emissions without revising the permit if:
  - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
  - b. the change is not covered under any applicable requirement.
- 4. Emissions Trading [15A NCAC 02Q .0523(c)]  
 To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

**I.A Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

“Excess Emissions” - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

“Deviations” - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

**Excess Emissions**

- 1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
- 2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
  - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
    - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
      - name and location of the facility;
      - nature and cause of the malfunction or breakdown;
      - time when the malfunction or breakdown is first observed;
      - expected duration; and
      - estimated rate of emissions;
    - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
    - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).



Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
  - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

**I.B Other Requirements under 15A NCAC 02D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

**J. Emergency Provisions [40 CFR 70.6(g)]**

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
  - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
  - b. the permitted facility was at the time being properly operated;
  - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
  - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

**K. Permit Renewal [15A NCAC 02Q .0508(e) and 02Q .0513(b)]**

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In

either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
  - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
  - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
  - c. the applicable requirements under Title IV; or
  - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
  - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
  - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
  - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or

interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(3)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(d)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

**EE. Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) – FEDERALLY-ENFORCEABLE ONLY**

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

**FF. Title IV Allowances [15A NCAC 02Q .0508(i)(1)]**

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

**GG. Air Pollution Emergency Episode [15A NCAC 02D .0300]**

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

**HH. Registration of Air Pollution Sources [15A NCAC 02D .0202]**

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

**II. Ambient Air Quality Standards [15A NCAC 02D .0501(c)]**

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

**JJ. General Emissions Testing and Reporting Requirements [15A NCAC 02Q .0508(i)(16)]**

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or .1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.

4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
  - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
    - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
    - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
    - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
  - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

**KK. Reopening for Cause [15A NCAC 02Q .0517]**

1. A permit shall be reopened and revised under the following circumstances:
  - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
  - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
  - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
  - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

**LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]**

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

**MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]**

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible

emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
  - a. a description of the change at the facility;
  - b. the date on which the change will occur;
  - c. any change in emissions; and
  - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

## ATTACHMENT

### List of Acronyms

<b>AOS</b>	Alternative Operating Scenario
<b>BACT</b>	Best Available Control Technology
<b>BAE</b>	Baseline Actual Emissions
<b>Btu</b>	British thermal unit
<b>CAA</b>	Clean Air Act
<b>CAM</b>	Compliance Assurance Monitoring
<b>CEM</b>	Continuous Emission Monitor
<b>CFR</b>	Code of Federal Regulations
<b>CSAPR</b>	Cross-State Air Pollution Rule
<b>DAQ</b>	Division of Air Quality
<b>DEQ</b>	Department of Environmental Quality
<b>EMC</b>	Environmental Management Commission
<b>EPA</b>	Environmental Protection Agency
<b>FR</b>	Federal Register
<b>GACT</b>	Generally Available Control Technology
<b>GHGs</b>	Greenhouse Gases
<b>HAP</b>	Hazardous Air Pollutant
<b>LAER</b>	Lowest Achievable Emission Rate
<b>MACT</b>	Maximum Achievable Control Technology
<b>NAA</b>	Non-Attainment Area
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NCAC</b>	North Carolina Administrative Code
<b>NCGS</b>	North Carolina General Statutes
<b>NESHAP</b>	National Emission Standards for Hazardous Air Pollutants
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NSPS</b>	New Source Performance Standard
<b>NSR</b>	New Source Review
<b>OAH</b>	Office of Administrative Hearings
<b>PAE</b>	Projected Actual Emissions
<b>PAL</b>	Plantwide Applicability Limitation
<b>PM</b>	Particulate Matter
<b>PM<sub>2.5</sub></b>	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
<b>PM<sub>10</sub></b>	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
<b>POS</b>	Primary Operating Scenario
<b>PSD</b>	Prevention of Significant Deterioration
<b>PTE</b>	Potential to Emit
<b>RACT</b>	Reasonably Available Control Technology
<b>SIC</b>	Standard Industrial Classification
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>TAP</b>	Toxic Air Pollutant
<b>tpy</b>	Tons Per Year
<b>VOC</b>	Volatile Organic Compound